

REMARKS

Claims 1-12 are all the claims pending in the application. By this Amendment, Applicant amends claim 1.

Claim Rejections - 35 U.S.C. § 103

Claims 1-12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Inoue (U.S. Pub. 2001/0011373) in view of Kondo et al. (U.S. Patent 6,763,522, hereinafter “Kondo”), and further in view of O’Callaghan et al. (U.S. Patent 5,594,492, hereinafter “O’Callaghan”). Applicant respectfully traverses the rejection.

Claims 1, 3, 6, and 11

According to a non-limiting exemplary embodiment, electronic program guide (EPG) information is stored for various channels. When a user requests to display the stored EPG information for a channel, EPG information for only the requested channel is updated. Accordingly, updated EPG information for the requested channel can be quickly provided to the user. Independent claim concerns a related configuration and recites, *inter alia* (emphasis added):

(b) whenever a selected channel number is selected from among the N channel numbers for which the EPG information is displayed, tuning to a frequency of the selected channel number and updating only EPG information corresponding to the selected channel number at the tuned frequency.

The combination of Inoue, Kondo, and O’Callaghan neither teaches nor suggests this claimed feature because neither Inoue, Kondo, nor O’Callaghan, taken alone or in combination, discloses “updating only EPG information corresponding to the selected channel number at the tuned frequency.”

Kondo

Kondo discloses updating EPG information for **all channels**.

In Kondo, it is described, unlike analog television (ATV) broadcasts that “include only single program content since the bandwidth allocated to it’s physical broadcast channel is nearly fully utilized by the analog signal” (*see* Kondo, col. 1, ll. 38-40), in digital television (DTV) broadcasts “audiovisual signals with standard resolution can be compressed using, for example, MPEG compression schemes to attain sustainable rates of 6 Mbps, or approximately **3 to 4 DTV channels can be safely supported in a single, digital-signal transport stream** without congestion of the physical channel” (*see* Kondo, col. 1, ll. 44-49). Accordingly, as opposed to the single channel limitation of ATV broadcasts, DTV broadcasts include plural DTV channels in a single, digital signal transport stream.

Column 5, lines 19 to 23, of Kondo discloses how the tuner tunes to the frequency of the selected channel:

The selected broadcast source is provided as input to digital tuner 10 wherein a digital signal is demodulated from the carrier to provide **at least one digital signal transport stream**. The digital signal transport stream is asserted on bus 11 to transport stream de-multiplexor 12.

Accordingly, the tuner tunes to the channel frequency, demodulates the modulated broadcast carrier signal, and “a digital signal is demodulated from the carrier to provide at least one digital signal transport stream.” Further, column 5, lines 23 to 28, of Kondo discloses:

The transport stream de-multiplexor 12 separates the elementary digital data stream packets from the transport stream packet to provide elementary digital data signals including at least one audio 13, one video 14, and **program and system information streams 15**.

Accordingly, program and system information (PSI) streams, which “comprise a hierarchy of associated tables that provide electronic program guide data at the event level for

minor channels carried in the transport stream (see Kondo, col. 2, ll. 33-36), are demodulated from the digital signal transport stream.

The PSI tables include a System Time Table (STT) 71, an optional Rating Region Table (RRT) 72, a Master Guide Table (MGT) 73, and a Virtual Channel Table (VCT) 74 (see Kondo, col. 8, ll. 45-52). Specifically, column 9, lines 1 to 6, of Kondo describes the VCT:

The Virtual Channel Table (VCT) 74 contains a list of all of the channels that are, or will be, on-line plus their attributes; i.e., channel name, navigation identifiers, stream components, and the like. Conveniently, the VCT channel lists may also include analog channels and other digital channels found in different transport streams.

Thus, Kondo obtains information about all channels in the transport stream.

More specifically, in Kondo, when a user selects a new major channel, the system “reads the current version of the VCT [] from the currently broadcasting MGT as provided by the transport stream de-multiplexer at step 109” (see Kondo, col. 10, l. 63 - col. 11, l. 1). Specifically, the system analyzes version numbers in a Master Guide Table (MGT) (see Kondo, col. 10, ll. 1-12) to determine whether minor channels in a Virtual Channel Table (VCT) (see Kondo, col. 9, ll. 1-12) associated with a major channel (see Kondo, col. 10, ll. 43-48) change, determine whether events or messages for minor channels of the VCT in an Event Information Table (EIT) (see Kondo, col. 9, ll. 16-18) change, and determine whether information on television programs associated with each of the minor channels of the VCT in an Extended Text Table (ETT) (see Kondo, col. 9, ll. 18-20) change.

Therefore, Kondo makes clear that EPG information in every VCT, EIT, and ETT for every channel in the transport stream is updated.

At page 4 of the Office Action, the Examiner concedes that Inoue fails to teach or suggest “updating only EPG information corresponding to the selected channel number at the tuned frequency,” but the Examiner’s position is that Kondo cures Inoue’s deficient disclosure:

However, Kondo et al disclose whenever a selected channel number is selected from among the N channels number or which the EPG information is displayed, tuning to a frequency the selection channel (see fig. 5; the system receives the change channel request, displays the selected channel video, and updates the program and system information of the newly selected channel prior to displaying the updated EPG, col. 7, lines 60-67; col. 4, lines 25-37; the system tunes to the broadcast frequency of the selected channel, and the EPG of the system displays only updated program and system information for that channel, col. 12, lines 1-38, from this information).

As shown above, Kondo updates EPG information for every channel in the transport stream. The fact that Kondo “displays only updated program and system information” for a channel, upon which the Examiner’s position relies, is entirely irrelevant to how the updating is performed. Kondo just discloses what is displayed: old channel information is not displayed, while the updated channel information is displayed, but Kondo does not disclose the updating, as discussed in detail above, is performed for “only EPG information corresponding to the selected channel number at the tuned frequency,” and hence Kondo fails to cure Inoue’s deficient disclosure.

O’Callaghan

Again, at page 4 of the Office Action, the Examiner concedes that Inoue fails to teach or suggest “updating only EPG information corresponding to the selected channel number at the tuned frequency,” but the Examiner’s position is that O’Callaghan cures Inoue’s deficient disclosure:

And O’Callaghan et al. disclose updating only EPG information corresponding to the selected channel number at the tuned channel (data entries for a particular program can be updated only *when* that program is selected for

reception. This approach imposes fewer demands on the CPT used for implementing the DET, col. 7, lines 3-6).

O'Callaghan concerns a CATV distribution system in which a digital entertainment terminal (DET) receives video (*see e.g.*, O'Callaghan, Abstract, col. 6, ll. 28-46). Column 6, line 61, to column 7, line 6, upon which the Examiner's position relies, discloses:

The monitor and storage unit 426 monitors the incoming transport stream on an ongoing basis, examining every packet. The latest version of the program association table (PID=0 of FIG. 1) is extracted and stored for later use. A data structure suitable for such use is shown in FIG. 5. Also extracted from the data stream, are the program map information (e.g. PID 132 of FIG. 1), information from video sequence headers of video elementary streams defining, for example, frame rate, resolution and information to facilitate set up of the audio decoder. Alternatively, data entries for a particular program can be updated only when that program is selected for reception. This approach imposes fewer demands on the CPU used for implementing the DET.

As recited therein, O'Callaghan discloses (1) monitoring an incoming transport stream "on an ongoing basis" to extract information, or (2) extracting information "only **when** that program is selected for reception." The fact that O'Callaghan extracts information "only when that program is selected," upon which the Examiner's position relies, is entirely irrelevant to how the data is extracted. The Examiner's position improperly equates the temporal disclosure in O'Callaghan, *i.e.*, "when" the data is extracted that is a timing at which the data is extracted, with how the data extraction is actually performed. There is no teaching or suggestion that only particular data is extracted from the transport stream, and much less "updating only EPG information corresponding to the selected channel number at the tuned frequency," as recited in claim 1, and hence O'Callaghan also fails to cure Inoue's deficient disclosure.

As a result, even if Inoue, Kondo, and O'Callaghan could have somehow been combined, the combination of Inoue, Kondo, and O'Callaghan would still fail to teach or suggest the combination of features recited in claim 1, including "updating only EPG information

corresponding to the selected channel number at the tuned frequency,” and hence claim 1 and its dependent are patentable over the combination of Inoue, Kondo, and O’Callaghan for at least these reasons.

To the extent independent claims 3, 6, and 11 recite features similar to those discussed above recited in claim 1, claims 3, 6, 11, and their dependent claims are also patentable over the combination of Inoue, Kondo, and O’Callaghan for reasons analogous to those discussed above regarding claim 1.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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Date: May 16, 2011

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